

Yarmouk University

Faculty of Economics and Administrative Sciences
Department of Finance and Banking

M.A Finance

Master Thesis

Empirical Test of the Pecking Order Theory of Capital Structure of industrial companies listed in Gulf Cooperation Council stock markets

اختبار عملي لنظرية الاولويات في التمويل لهيكل رأس المال للشركات الصناعية المدرجة في اسواق دول مجلس التعاون الخليجي

Prepared by:

Mohammad Abualhija

Supervisor:

Dr. Ziad Zurigat

Co-Supervisor:

Prof. Ali Magableh

2014

Empirical Test of the Pecking Order Theory of Capital Structure of industrial companies listed in Gulf Cooperation Council stock markets

اختبار عملي لنظرية الأولويات في التمويل لهيكل رأس المال للشركات الصناعية المدرجة في أسواق دول مجلس التعاون الخليجي

By

Mohammad Abualhija

B. A. Economics, Al albayt University, 2011

A thesis submitted in partial fulfillment of the requirements for the degree of Master in Banking and Finance Sciences in the Department of Finance and Banking, Yarmouk University, Irbid, Jordan.

Approved by:

Dr. Ziad Zurigat, ... Main supervisor

Prof. Ali Magableh, ... Co supervisor

Dr. Demeh Daradkah, ... Member

Dr. Hassan Aleassa, ... Member

19/05/2014

Dedication

I would like to dedicates my thesis to my loving parents "Mona & Ali " who have given me the physical, financial, and spiritual support

To my loving sister "Soher "

To my family "Malik, Doha, Saja, Shorouq "

To my best friend for his support and encouragement "Ziad Barqawi "

I would also like to dedicate this work to Miss Niveen Abualhija who has been there for me throughout the entire period of writing and has supported me spiritually and academically

Thanks all for being in my life

Acknowledgments

By Allah's will, aid, support, and by efforts of many people the completion of this study was possible.

I am greatly indebted to Dr. Ziad M. Zurigat & Pro. Ali Magableh for their enthusiastic support, continuous supervision, and guidance during the preparation of this study; their keen knowledge and interest make this work possible.

Gratitude is also due to the members of thesis committee, Dr. Demeh Daradkah and Dr. Hassan Aleassa, for their precious time and invaluable comments.

Many thanks are also extended to all the teaching staffs in Yarmouk University who support me in my study

"To all of them I am deeply indebted"

TABLE OF *CONTANTS*

List of Abbreviation

GCC	Gulf Cooperation Council
SSE	Saudi Stock Exchange
MSM	Muscat Stock Market
ESE	Emirates Stock Exchange
QSE	Qatar Stock Exchange
KSE	Kuwait Stock Exchange
BHB	Bahrain Bourse
OPEC	Organization of the Petroleum Exporting Countries

List of Tables

Abstract:

Empirical Test of the Pecking Order Theory of Capital Structure of industrial companies listed in Gulf Cooperation Council stock markets, master thesis in Yarmouk University, 2014.

Prepared by: Mohammad Abualhija

Supervisors:

Dr. Ziad Zurigat – Main Supervisor–

Prof. Ali Magableh – co- supervisor–

This study aims to test the pecking order theory of capital structure of industrial companies listed in Gulf Cooperation Council stock markets during the period (2005 – 2012).

To accomplish this objective, the pecking order model is used and tested using polled and panel data analysis techniques.

The estimation results provide no evidence supporting the pecking order theory in industrial companies listed in Gulf Cooperation Council stock markets. Industrial companies in the GCC do not rely totally on debt to finance its financial deficit, they rely on other sources which are contradicting with the

prediction of pecking order theory. However, the study provides evidence that supports the size effect, where it was found that the size has a positive influence on the financial deficit; implying that financial constraints exist in the GCC stock markets.

The study recommends to follow the policies that lead to reduce the financial constraints suffered by industrial companies listed in the GCC stock markets, by solving the problem of asymmetric information, raising the level of transparency, increasing the level of investor protection, reducing agency problems, and finally increasing the capacity of industrial companies in these markets to diversify their funding sources.

Keywords: Pecking Order Theory, Capital Structure, Gulf Cooperation Council.

ملخص الدراسة

اختبار عملي لنظرية الأولويات في التمويل لهيكل رأس المال للشركات الصناعية المدرجة في أسواق دول مجلس التعاون الخليجي

إعداد: محمد أبوالهيجاء

إشراف: د. زياد محمد زريقات –رئيسا-

أ.د. علي المقابلة –مشرفا مشاركا-

تهدف هذه الدراسة الى اختبار نظرية الاولويات في تمويل رأس المال للشركات الصناعية المدرجة في أسواق الاسهم في دول مجلس التعاون الخليجي خلال الفترة (2005-2012).

ولتحقيق هذا الهدف تم استخدام و اختبار نموذج اولويات التمويل باستخدام تقنيات تحليل البيانات التجميعية وبيانات السلاسل الزمنية المقطعية.

لم تقدم نتائج الدراسة دليل على وجود دعم لنظرية الاولويات في التمويل لهيكل رأس المال في الشركات الصناعية المدرجة في أسواق دول مجلس التعاون الخليجي. حيث ان الشركات الصناعية في دول مجلس التعاون الخليجي لا تعتمد بشكل كامل على الدين طويل الاجل لتمويل عجزها المالي وهو ما يتناقض مع ادبيات نظرية الاولويات في التمويل، ومع ذلك قدمت نتائج الدراسة دليل يدعم اثر الحجم، حيث تبين ان الحجم له تأثير ايجابي على العجز المالي مما يشير الى وجود قيود مالية في اسواق دول مجلس التعاون الخليجي.

توصي الدراسة الى اتباع السياسات التي تؤدي الى الحد من القيود المالية التي تعاني منها الشركات الصناعية المدرجة في اسواق دول مجلس التعاون الخليجي من خلال حل مشكلة عدم تماثل المعلومات، ورفع مستوى الشفافية، و زيادة مستوى حماية المستثمر، الحد من مشكلة الوكالة، واخيرا زيادة قدرة الشركات الصناعية في هذه الاسواق لتنويع مصادر تمويلها.

الكلمات المفتاحية: نظرية الأولويات في التمويل، هيكل رأس المال، دول مجلس التعاون الخليجي.

Chapter one: Introduction and Overview

1.1 Introduction

1.2 Statement of the Problem

1.3 Importance of the Study

1.4 Objectives of the Study

1.5 Organization of the Study

Chapter one

Introduction and Overview

1.1 Introduction:

It is well-known that the irrelevance theory suggests that the firm's value is independent of its capital structure; More precisely, the firm's value is not affected by the way of financing, whether it uses debt and/or equity. The underlying assumptions behind this statement is that the capital market is perfect with no brokerage costs, no taxes, no bankruptcy costs, investors can borrow at the same rate as corporations, and finally no asymmetric information where the investors and managers have the same access to information about the firm's future investment opportunities.

In fact the presence of market frictions makes the cost of external funds significantly higher than those of internal ones, which increases a firm's reliance on internally generated funds more than externally generated. Capital market is not perfect makes the capital structure relevant and significant by the presence of market frictions, such as agency costs (Jensen and

Meckling, 1976; Jensen, 1986), asymmetry information (Myers and Majluf, (1984); Myers, (1984).

According to agency theory, Jensen and Meckling, (1976) who argues that the agency problem is a conflict between managers and shareholders, where the costs of this problem are carried by shareholders. Instead, Jensen, (1986) argues that using debt and dividends may contribute to the agency problem.

Myers and Majluf (1984) and Myer (1984) who introduce the pecking order theory under asymmetric information where the firms follow a particular order in choosing its sources of funds, which has significant effects on cash flows, dividends policy, investment opportunities. (Al-Ghraibeh et al., 2013)

Numerous studies have been conducted in the context of both developed and developing capital markets have been provided evidence suggests that the capital market is not perfect implying that market frictions strongly exist and consequently influencing a firm's investment and financing decisions, since the absence of these frictions makes the internally generated

funds and externally generated funds such as debt and equity are perfectly substitute for each other.

1.2 Statement of the Problem:

In Gulf Cooperation Council, where the capital markets are imperfect, and emerging markets, some of Modigliani and Miller's considerations are relevant and may affect firm's polices in borrowing and issuing equity. The pecking order theory tests what happened if M&M assumptions do not hold, tacking into consideration that the GCC is non-tax entities implying that debt has no tax advantage which lead to reduce the use of debt, which makes relying on internal source of funding more from external source, it is what makes ranging financial management in the use of sources of funding.

So, research problem can be summed up the following question:

Is the "pecking order theory" applied in the Gulf Cooperation Council (GCC) stock markets? And if it is existed would it be able to explain the behavior of financial management in industrial companies listed in these markets?

1.3 Importance of the Study

The importance of this study lies in dealing with such important issue which is testing the pecking order theory .It can be considered as an extension for other related researches in the field of financial management.

In addition to what is noted from the literature review: the pecking order theory is widely tested in the context of developed countries; little evidence is available from developing countries. The current study tries to fill these gaps in literature by testing the pecking order theory in Gulf Cooperation Council stock markets, since to the best researcher's knowledge; there are a few published studies that have discussed and tested the pecking order theory in these markets.

So, the researcher gives the chance to other researchers and encourages them to continue dealing with this field.

1.4 Objectives of the Study

The objectives of the study are to:

1- Investigate the capability of the pecking order theory in explaining the financing behavior of industrial companies listed in the GCC stock markets.

2- Provide evidence of funding patterns of industrial companies listed in the GCC stock markets.

3- Investigate the firm's size effect on the financing behavior.

1.5 Organization of the study

In addition to the current chapter the study included another four chapters; chapter two introduces the theoretical framework, chapter three presents the previous studies, chapter four presents the sample collection method and explains the methodology of this study, and finally chapter five summarized the results and provides recommendations for future work in this area.

Chapter Two: Theoretical Framework

2.1 Introduction

2.2 The Pecking Order Theory

2.3 Factors that Induce Firms to Follow the Pecking Order Behavior

2.4 Gulf Cooperation Council Stock Markets

Chapter Two

Theoretical Framework

2.1 Introduction

Firm's capital structure generally refers to the mix of debt and equity that a firm uses to finance its investments. Many different mixes "debt and equity" could be created, these different ways of mixing that combination led to the formulation of theories.

The theoretical framework of capital structure theories generally referred to Modigliani and Miller (1958) who concluded that under certain assumptions, the firm's value is irrelevant to the way of financing "in perfect market". The presence of market frictions (e.g. agency problem, asymmetry information, bankruptcy costs,….etc) lead to formulation a lot of theories, this study is completely going to focus on the pecking order theory which was proposed by Myers and Majluf (1984) and Myers (1984) and has received considerable attention in recent research on capital structure field.

Therefore, this chapter is organized as follows: section 2.2 presents the pecking order theory, section 2.3 presents the factors that induce firms to follow the pecking order behavior to finance their new investment, section 2.4 introduces an overview of GCC stock markets.

2.2 The Pecking Order Theory

The pecking order theory posited by Myers (1984) who was inspired by the idea from Donaldson's book (1961) "*Management's strongly favored internal generation as a source of new funds….. Management considered these policies in the best interests of the common shareholders…., these standards show the use of retained earnings as distinctly more beneficial to per share performance than equity issues and even debt".* [10, p. 67]. Myers (1984) argues that an adverse selection creates a preference ranking over financing sources: beginning with returned earnings, followed by debt, and then equity, this ranking referred to Myers and Majulf (1984) adverse selection model, in which they argue that information asymmetry between

managers and stockholders, in case of issuing new securities to finance investment, these securities will be under-priced, which causing a loss of wealth for the current shareholders, this is because managers cannot give the full image about investment opportunity to potential investors are unable to estimate the risk of this opportunity, consequently interpreting the firm's decision to issue new equity as a share losing and then pricing new securities accordingly, under-pricing led to create a conflict (between the current and new shareholders) which the firm can be avoided by rejecting the new opportunity even if its net present value is positive, because managers act in favor of the old shareholders. So the pecking order theory as described by Myers (1984). Firstly firms prefer internal financing by retained earnings, and then they adjust their target dividend payout ratios accordingly to their investment opportunities. If the firms required external finance, firms issue the safest security first bond, then hybrid securities, finally they issue equity as a last

resort, which implies that the debt ratio reflects the firm's requirements for external finance.[1]

According to Myers and Majluf (1984) the predictions of the pecking order theory are driven by the asymmetry information or adverse selection costs. However, over the time relative studies provide evidence indicates that there are more factors that lead to follow the financing behavior of the pecking order theory.

2.3 Factors that induce the firms to follow the pecking order behavior:

In this section we will give more attention to the pecking order theory and why firms may preferred to financing hierarchy/ pecking order behavior:

2.3.1 Asymmetric Information

Asymmetric information is the most important factor that induces the firms to follow the pecking order behavior where the firm's managers have more information compared by the

[1] See the conclusions of Myers, S. C. (1984). "The capital structure puzzle". The journal of finance, 39(3), 574-592.

available information in markets. According to Myers and Majluf (1984) and Myers (1984), the firm's managers know more about firm's value and growth opportunities, than investors, and particularly new one, which implies that the new investors would required an addition risk premium to new equity issuance, which force the new issuance to be undervalued, and that explains why firms would prefer financing by pecking order behavior, the other assumption is that managers act in the best benefits of currently shareholders, which may the reason behind reject a positive NPV project. (Harris and Raviv, 1991).

To avoid the adverse selection, managers will prefer "retained earnings" due to that they are free of adverse selection problem, while the "debt" is clearly less risky than equity and has only little adverse selection, finally "issuing new equity" as we indicated early, subject to more adverse selection. So the ranking will be; retained earnings are a better source of finance than debt, and debt is a better source compared with issuing new equity.

According to Myers, (1984) asymmetric information problem introduces an extra cost of issuing equity which could be passing up good investment opportunity.

Information asymmetric reduces the accessibility to reach external funds, especially for small size companies since it have limited financial instruments to finance their projects. (Zurigat and Ghraibeh, 2011).

2.3.2 Agency Costs

The conflicts of benefits between the mangers and the shareholders, according to Jensen and Meckling (1976), who analyzed the conflict between the shareholders and managers as an agency problem, which associated with costs that may increase the cost of raising funds externally, and then forcing managers to prefer internally generated funds as a cheapest source of financing, on the other hand we must not ignore the conflict between managers/shareholders and debt holders which are associated with using debt, and which also increasing the cost of externally funding. So firms with agency problem will

increase the reliance on internally generated funds, in result the firms will follow the financing hierarchy.

2.3.3 Transaction Costs

Transaction costs are the costs which associated with raising fund externally (equity/debt), according to Baskin (1989), transaction costs for debt are smaller than issuing new equity, which motivate firms to prefer internally generated funds rather than externally funds, to prefer debt compared with issue new equity, and as it confirmed by Kadapakkam et al. (1989) will motivate firms to financing hierarchy.

2.3.4 Bankruptcy Costs

There are two kinds of bankruptcy costs, direct and indirect costs. Direct costs are directly related to administering the process of bankruptcy (e.g. legal expenses, accounting and other professional costs. Indirect costs are indirectly related to bankruptcy and it depends up on the market setting (e.g. lost sales, lost profit…etc). According to Warner (1977) the direct costs of bankruptcy will create transaction costs which are

associated with the negotiation between claimholders. De Anglo and Masulis, (1980) argue that debt is more expensive for firms with non-debt tax shield due to the probability of bankruptcy with increasing leverage, and that which motivate the firms to prefer internally generated funds.

2.4 Gulf Cooperation Council Stock Markets

Gulf Cooperation Countries consists of six countries; United Arab Emirates, Saudi Arabia, Bahrain, Kuwait, Qatar, and Oman, represents one of the wealthiest country grouping in the world, with the largest proven crude oil reserves (486.8 billion barrels), representing 35.7% of the World's total; while the OPEC accounts for 70% of the World's total proved crude oil reserves.[2] However, the capital markets in these countries are emerging markets; remains small and behind their potential.

However, the securities trading in Gulf Cooperation Council was known since a long time, beginning in Saudi Arabia in the mid 1930's when "Arab Automobile Company" was established

[2] Gulf Base website

as a joint stock company. In 1982 the "National Bank of Kuwait" was established as a first shareholding company in Kuwait. Also in 1957 the first Bahrain shareholding was established followed by establishment of a number of public shareholding companies which have been traded in a non-official market Al Jawhara.

In the early 1980's Saudi Arabia government's has decided to form a regulated market for trading, in 1984; (SAMA) was formed to regulate and develop the market until the capital market authority was established. In 1983, the government of Kuwait decided to establish the Kuwait Stock Exchange which assigned to regulate the trading activities. In Oman, Muscat Securities Exchange was established in 1988. In Bahrain, following the crash of Al Jawhara market, the government of Bahrain established Bahrain Stock Exchange in 1987 and began work officially in 1989. In 1995 Doha Securities Market was established in Qatar and started work officially in 1997. In addition to Abu Dhabi Securities Exchange which established in 2000, Dubai Financial Market was established as a secondary

market for trading which began the trading activities in March 2007.

2.4.1 Activities of Gulf Cooperation Council Stock Markets

Table (2.1) shows the evaluation of the trading in the GCC stock markets during the period 2005-2012, the difference between the GCC stock markets in term of the degree of development and competition, transparency, investor protection rights, firm's financial constraint, in addition to the high difference in the costs among funds sources, all of this lead to a clear differences in the behavior of financial management.

Noted from the table; there is a variation on the volume traded among the GCC stock markets, since the most of active markets in term of volume traded are the Emirates Security Market, Kuwait, and finally Tadawul in Saudi Stock Market. The traded volume in other markets seems relatively few compared with the pervious markets, but they are close to each other during the period of the study.

Table (2.1) GCC Stock Market Activities

	Saudi Stock Exchange (Tadawul)			Kuwait Stock Exchange (KSE)		
year	Market capitalization (SR bn)	Value traded (SR bn)	Volume traded (million share)	Market capitalization (KD million)	Value traded (KD million)	Volume traded (million share)
2005	2,438.20	4,138.696	75,246	30,396	28422	52,246
2006	1,225.86	5,261.851	78,510	30,979	17284	37,658
2007	1,946.35	2,557.713	66,131	33,837	37009	70,438
2008	924.53	1,962.945	59,651	30,726	35747	80,851
2009	1,195.51	1,264.011	56,802	27,722	21828	106,332
2010	1,325.39	,759.184	33,137	33,679	12526	74,692
2011	1,270.84	1,098,836	48,263	24,053	6068	38,423
2012	1,400.34	1,929,318	82,545	29,377	7216	82,806
	Qatar Exchange (QE)			**Muscat Security Market (MSM)**		
Year	Market capitalization (QR million)	Value traded (QR million)	Volume traded (million share)	Market capitalization (OR million)	Value traded (OR million)	Volume traded (million share)
2005	317,202	102,848	1,033	5,878	1,407	515
2006	221,740	74,937	1,865	6,221	1,130	1,113
2007	347,695	108,929	3,411	10,272	2,662	3,423
2008	279,038	175,552	3,894	7,912	3,662	4,447
2009	320,081	92,165	3,450	9,092	2,280	6,092
2010	448,938	67,185	2,094	10,901	1,320	3,024
2011	457,352	83,516	2,303	10,342	981	2,366
2012	459,884	71,467	2,428	11,665	1,025	4,319
	Emirates Securities Market (ESM)			**Bahrain Bourse (BHB)**		
Year	Market capitalization (AED million)	Value traded (AED million)	Volume traded (million share)	Market capitalization (BD million)	Value traded (BD million)	Volume traded (million share)
2005	893,683	509,868	33,812	6,500	268	458
2006	514,697	418,149	50,940	7,960	523	728
2007	824,629	554,334	157,318	10,190	403	851
2008	363,872	537,134	126,439	7,520	787	1,675
2009	404,703	243,490	148,297	6,130	178	852
2010	385,430	103,805	56,003	7,560	108	612
2011	346,136	56,819	40,996	6,250	105	520
2012	379,062	70,706	65,858	5,860	110	628

Source: prepared by the researcher depending on the annual reports of the markets

Chapter Three: Literature Review

3.1 Introduction

3.2 Studies in Developed Countries

3.3 Studies in Developing Countries

3.4 What Distinguish this Study from the other Studies

Chapter three

Literature Review

3.1 Introduction

In corporate finance there is numerous of literature that examines the financial behavior of firms. Testing the Pecking Order Theory has been one of the most contentious issues in the finance literature, also the most of empirical research shows that the Pecking Order Theory is more appropriate to explain the financial behavior than Static Trade-off Theory.

Several studies have tested the suggesting of the Pecking Order Theory, some of these studies follow the study of Shyam-Sunder and Myers (1999) which have proposed a model based upon the prediction that internal funds deficit is the main determinant of the change in debt level, while the other studies tested the Pecking Order Theory in terms of its predictions with respect to some of explanation variables such as size, profitability, and growth….etc.

Therefore, this chapter presents some of the pervious studies that are related to the Pecking Order theory; firstly: section 3.2

the previous studies in developed countries, section 3.3 Secondly: the previous studies in developing countries. And finally section 3.4 presents what distinguish this study from other study.

3.2 Studies in Developed Countries

Starting from Shyam - Sander and Myers (1999), based on data from US companies during the period (1971-1989); they tested the Trade-Off theory and Pecking Order theory. For pecking order theory: they found that the Pecking Order is the best descriptor of corporate financing behavior, due to the way in which the companies plan to face the deficit starting by the debt. On the other hand, (Frank and Goyal, 2003) found that the support for the Pecking Order declines when they have used a broader sample of US firms during the period (1971-1998) in which more small firms were traded during 1980s and 1990s compared with 1970s, since those small firms did not follow the Pecking Order theory. Justifying what is found in Shyam - Sander and Myers (1999) test which uses a small sample, Frank and Goyal (2003) noted that when narrower samples of firms are

used, the greatest support for the pecking order will be found. However, the time period effect is not entirely due to more small firms in the 1990s, even the attention goes to largest quartile of firms, the support for the Pecking Order theory declines over time. Mayer and Sussman (2004) also confirm the previous results by using data of small and large US companies. They found that large firms fund large investment projects with debt while small firm tend to use equity. Another result of Mayer and Sussman's (2004) is in the line with Myers (2001) who argues that when debt is costly, firms will prefer to issue equity. Finally, both Mayer and Sussman conclude that the combination of trade-off and Pecking Order theories provides a good description of US firms financing behavior whether in short run or long run dynamics.

Based on data from London Stock Exchange, (Adedeji, 2002) tested the Pecking Order hypothesis against trade-off theory on a cross-sectional sample of 608 companies during the period 1994-2000. For the Pecking Order hypothesis; it explains new debt issues at high debt ratio levels much better than it does

at low debt ratio levels, contrary to Shyam-Sunder (1999) and Myers' (1984) results that Pecking Order hypothesis explains new debt issues at low debt ratio levels better than it does at high debt ratio levels. The results of Adedeji (2002) regarding the Pecking Order theory appear from the evidence that only 20-30% of internal funds flow deficit are financed by new debt issues and that Pecking Order hypothesis does not explain new debt issues better than Static Trade-off theory. Adedeji also observes that some variables rejected by Pecking Order hypothesis as irrelevant to firm's decisions to issue new debt such as: growth and size, while those variables are suggested by static trade-off theory as significant power variables to explain new issue of debt. Adedeji (2002) also states that "*There is a considerable improvement in the fit with data when these variables are combined with internal funds flow deficits. However, evidence obtained from power tests conducted to determine whether the hypothesis and the theory are capable of giving negative results when they are false, is mixed.*" [1, p. 1].

Benito (2003) examines the propensity of a firm to issue debt and equity, by using data from US and Spanish markets. He contended that low levels of debt are used by a higher cash flow firms while the higher investment level will increase it need for debt funds. The results indicated that debt varies negatively with profitability and positively with investment. Benito (2003) concludes also that the results for both countries (UK and Spain) are in line with pecking order theory.

Using data from US firms, Ghosh and Cai (2003) aimed to test whether firm's capital structure follows optimal capital structure or pecking order theory during the period 1983-2003. Considering that the industry mean is a predictor of a firm's capital structure, they found that the firms prefer using internal financing furthermore using external financing. However, when external funds are required, a firm prefers debt financing to equity financing, which is in the line with pecking order theory.

Vicol (2010) using a sample of USA companies during the financial crisis, the study finds that the trade-off theory is better

than the pecking order theory to explain the financial behavior in the USA listed companies during the period of 2007-2009.

Stenshamn (2004) found that Swedish firms traditionally do not focus on shareholder's interest, when he finds evidence that Swedish managers do not take action in shareholders interest as much as they are expected. Ekeroth and Andre'n (2006) test whether Swedish non-financial firms act in accordance with optimal capital structure theory and/or pecking order theory. During the period 1998-2004, they found that Swedish companies prefer internal financing followed by equity and as last choice debt issuance .This implies that Swedish companies follow neither optimal capital structure theory nor pecking order theory.

Using a sample of 702 industrial companies listed in Australia Stock Exchange during the period of 1995-2009, Cross (2010) provides evidence that the Australian firms do not follow the pecking order theory.

Cotei and Farhat (2009) tested whether the pecking order theory and the trade-off theory are mutually exclusive or not, by

using a sample of US companies. They provided the evidence that under the pecking order assumptions, the trade-off theory factors played a significant role in determining the proportion of debt to be issued or repurchased. On the other hand, under the trade-off theory assumptions the pecking order theory factors are major determinants of rate of adjustment. Finally the results imply that the pecking order theory and the trade-off theory are not mutually exclusive.

In the recent study of Ooldrink (2013) that was conducted in Dutch, using a sample of 107 listed firms during the period 2008-2011, and depending on OLS-regressions, Ooldrink Concludes that the pecking order theory in capital structure decisions prevail while there is a moderate support for the static trade-off theory.

Using a sample of 120 firms listed on the Toronto Stock Exchange in Canada, based on the study results, LIU (2013) indicates that the Canadian firms follow the weak form of the pecking order theory.

Another recent study in UK, Wang (2013) by using a sample of non-financial during the period 2006-2011, the results provide evidence that the UK firms do not follow financing hierarchy which implies that they don't follow the pecking order theory. However, the study of (Manaseer et al., 2011) using a sample of UK firms listed in London Stock Market during the period of 1999-2004, the results provide evidence that the firms in UK preferred debt to finance its deficit which in line with the pecking order theory.

3.3 Studies in Developing Countries

There are few studies about the behavior of financial management in developing countries, despite of the importance of this issue and its impact on the markets and the economies of these countries. However, Pandey (2001) examined the influence of some variables such as: profitability, size, growth, risk and tangibility on the debt policy of Malaysian firms during the period 1984-1999.The results show that these variables have significant influence on all types of debt, unlike the evidence of the developed market which indicates that the risk variable loses

its significance. Pandy (2001) results confirm that the capital structure prediction of the pecking order theory in an emerging capital market, since the profitability has negative relationship with all types of debt ratio in all periods and all estimation method.

Using data from Sao Paulo (Brazil) Stock Exchange (Medeiros and Daher, 2004) try to find the best empirical explanation for the capital structure of Brazilian firms during the period 1995-2002, by using panel data econometrics methods. They finally find that the pecking order theory provides the best explanation for the capital structure in Brazil.

(Hodgkinson et al, 2005) by using a sample of 55 companies during the period from 1995 to 1999 listed in Libya Stock market, the results found that little evidence existed to support the pecking order theory in Libya.

In their study (Singh and Kumar, 2008) try to explain the behavior of the Indian firms using data consisted of firms from ten industries for the period 1991-2007. The models are tested

for a sample dataset and the results seem to suggest the existence of the trade-off theory in the Indian firms.

Using data from 114 non-financial Jordanian firms, Zurigat (2009) investigated the empirical evidence of the pecking order theory in Jordanian market as a developing market, by estimating two separate models: the first one which proposed by Shyam-Sunder and Myers (1999) and the other one that proposed by Frank and Goyal (2003).The results do not support the pecking order theory, since the Jordanian firms use debt and equity funds to finance their financing deficit with equity issues track the financing deficit relatively more closely, consistent with these result, Bouchenaki (2011) aims to test the pecking order theory of capital structure of industrial companies listed in Amman Stock Exchange during the period 2000-2009, Bouchenaki (2011) finds that the industrial companies may not follow the pecking order theory since they don't rely on debt to finance its financial deficit.

Sakatan (2010) tries to investigate the determinants of the capital structure in the emerging countries particularly Saudi

Arabia, by using a sample of non-financial Saudi firms during the period 1998-2007, and employing a number of explanatory variables includes: assets structure, profitability, growth, liquidity, company size, business risk, and dividend policy. The results indicate that the variables tacking into consideration the theoretical predictions as to the direction of their influence on debt ratio and proxies are found in line with pecking order theory.

3.4 What Distinguish This Study from Other Studies

The literature review in this chapter is classified into two parts; the first one reviews the previous studies that examined the pecking order theory in the developed countries, whilst the second part reviews the pervious studies in developing countries.

Although the pecking order theory is widely tested in the context of developed countries, little evidence is available from developing countries. The current study tries to fill these gaps in literature by testing the pecking order theory in the Gulf Cooperation Council.

Chapter Four: Research and Data analysis

4.1 Introduction

4.2 Sample and Data Collection

4.3 Model Specification

4.4 Estimation Results

Chapter Four

Methodology and Descriptive Data

4.1 Introduction

This study aims to investigate the pecking order theory of capital structure in industrial companies listed in the GCC stock market over a period of (2005-2012), using different economics techniques to test its empirical model. Therefore, this chapter is structured as follows: section 4.2 presents the study population and sample, section 4.3 introduces model specifications, section 4.4 the estimation results obtained using panel data analysis.

4.2 Sample and Data Selection

Our empirical test uses a sample of industrial firms listed in the GCC stock markets, during the period 2005-2012. The sample included 64 industrial firms, as a result of missing data; also we excluded firms which listed after 2005.[3] However, study population; all industrial companies listed in this markets which equal 126 industrial companies. The data are collected from the

[3] The researcher excluded the industrial firms which are listed in Dubai Security market since the market start the trading activities in 2007, in addition to the firms which listed in Bahrain, as a result of missing data.

annual reports, statement of cash flow and balance sheet which are obtained from the gulf base website.[4]

Table (4.1) shows the number of industrial companies which were selected as a sample from each market.

Table (4.1) number of companies from each market

Market	sample	# of listed companies
Saudi Stock Market	10	14
Muscat Security Market	22	46
Abu Dhabi Security Exchange	10	13
Qatar Exchange	4	9
Kuwait Stock Exchange	18	38
Total	64	126

4.3 Models Specifications:

To accomplish the main aim of this study, the study uses the model which was predicted by (Shyam-Sunder and Myers, 1999) and was developed by (Frank and Goyal, 2003).

[4] www.gulfbase.com

According to Shyam-Sunder and Myers, (1999) who concluded that the imbalance between internal cash flow, net of dividends, and real investment, induce firms to raise funds externally to avoid forgoing profitable investment opportunities when no sufficient cash flow available for all valuable investment opportunities consistence with this argument.

Frank and Goyal, (2003), suggested that the total deficit at the end of the year must be equal the total amount of debt issued and /or equity issued from one year to another year, as given by the following equation:

$$\Delta DBT_{it} + \Delta EQU_{it} = DEFCT_{it} \qquad (4.1)$$

Where:

ΔDBT_{it}: the net debt issued by firm i in year t.

ΔEQU_{it}: the net equity issued by firm i in year t.

$DEFCT_{it}$: the internal fund deficits of firm i at year t and calculated as follows:

$$DEFCT_{it} = DIV_{it} + INV_{it} + \Delta WC_{it} - CFLOW_{it} \qquad (4.2)$$

Where:

DIV_{it}: cash dividends in year t.

INV_{it}: net investment in year t (The difference between the fixed assets in the yeart-1 and year t to each firm).

ΔWC_{it}: change in working capital in year t (The difference between the working capital in year t-1 and year t to each firm).

$CFLOW_{it}$: cash flow after interest and taxes.

According to Shyam-Sunder and Myers, (1999) in the strict pecking model, all components of the deficit are exogenous as long as safe debt can be issued, there is no incentive to move down the pecking order and issue stock. Also the firms following the pecking order theory should have one-to-one relationship between the new debt issues and its financing deficit.

This becomes of the asymmetric information that may give rise to the adverse selection behavior in potential investor , Myers and Majluf (1984), the presence of this behavior induce potential investors to pricing new stock issues at discount, increasing the cost of equity financing, consequently forcing firms to give up some of their valuable investment project or opportunities.

Based on the above analysis, the pecking order model can be formulated as follows:

$$\Delta TDBT_{it} = \alpha_0 + \alpha_1 DEFCT_{it} + \varepsilon_{it} \qquad (4.3)$$

Where:

α_0 & α_1: are the coefficients to be estimated, according to Shyam-Sunder and Myers, (1999), the pecking order hypothesis suggested that α_0 equal zero and α_1 equal one.

$\Delta TDBT_{it}$: the changes in the total debt in firm i between year t and t+1.

$DEFCT_{it}$: the internal funds deficit of firm i in year t.

ε_{it}: the error term.

It is worth nothing that the all dependent and independent variables of model (4.3) are scaled by total assets to avoid the heteroskedasticity problem that may arise due to the different size of the study sample firms.

To control for the size effects which might exist and influence the firms financing decisions new dummy interaction model is developed, motivated by the fact that small firms are considered to be financially constrained while the large one are

not, where large firms are more diversified, with more collaterals and that make them less subject to the financial distress.

$$\Delta TDBT_{it} = \alpha_0 + \alpha_1\, DEFCT_{it} + \alpha_2 D_{it}^{sz} + \alpha_3\, INTAC_{it}^{sz} + \varepsilon_{it} \quad (4.4)$$

Where:

α_2: the differential intercept coefficient for the differential size among firms.

α_3: the differential slop coefficient.

A size dummy variable which equal one when the logarithm of total assets greater than its mean and zero otherwise, the second variable is the interaction dummy variable will be constructed by multiplying the size of the dummy variable by the financial deficit variable, hence the new variable will be formalized as:

- Large firm (D_{it}^{sz}=1)

$$\Delta TDBT_{it} = (\alpha_0 + \alpha_2) + DEFCT_{it}\,(\alpha_1 + \alpha_3) + \varepsilon_{it} \quad (4.4.a)$$

- Small firm (D_{it}^{sz}=0)

$$\Delta TDBT_{it} = \alpha_0 + \alpha_1\, DEFCT_{it} + \varepsilon_{it} \quad (4.4.b)$$

The study empirical model will be tested using panel data analysis which is estimated using either fixed and random effects techniques.

A panel data technique assumes that the error term captures the differences between the firms over the time, and helps in removing the colinearity and increases the degrees of freedom.

The fixed effect model have constant slope but the intercept differs according to the cross individual (companies), not only but also it may or may not differ over time, so we cannot be used to investigate the time - invariant causes since the fixed effects models are design to study the cases of changes within individual.

On other hand the random effect assumes that the individual's error term is not correlated with the independent variable which allows for time-invariant variables to play a role as explanatory variables.

To decide between random and fixed effects Hausman test is used, with null hypothesis which indicated that the preferred model is the random effects.

4.4 Estimation Results

This section consists of two sub-sections the first presents the descriptive statistic while the other one presents the estimation results of model (4.3)

4.4.1 Descriptive Statistical

This part of the analysis deals with the descriptive statistical of averages, standard deviations, the lowest and the highest value of the study different variables.

Table (4.2) descriptive statistical

Variable	Mean	SD	Min	Max
LEV	0.4446	0.1372	0.0270	0.8123
L~T Debt	0.3409	0.204	0.008	0.7984
Financial Deficit	-.3241	0.1151	-0.4571	0.7541
Size	14.267	5.539	5.548	21.433

The results presented in table (4.2) show that the leverage (LEV) has a mean value of 44.46 %, which indicates that the industrial firm listed in the GCC stock markets have a high degree of debt in its capital structure and standard deviation of 13.72% with minimum value of 2.7% and maximum value of 81.23%.

The long term debt (L~T Debt) has a mean value of 34.09% and standard deviation of 20.4% with minimum value of .08% and maximum value of 79.84%.

As for the financial deficit has a mean value -32.41% which means that the industrial firms in the GCC stock markets suffer from a deficit in financing, and standard deviation of 11.51% with minimum value of -45.17% and maximum value of 75.41% also there is a difference from year to year in the volume of the financial deficit as a result of variations among the dividends, net investment, working capital, and the cash flows

And finally the size which has a mean value 14.247 and standard deviation of 5.539 with minimum value of 5.548 and maximum value of 21.433.

4.4.2 Estimation results of model (4.3)

This section presents the results which are obtained from multi regression analysis for the study's models, using fixed effect and random effect models, the study employs Hussman test to decide which one is the preferred specification for dataset.

As the insignificant of Hausman test,[5] and significant of Lagrang Multiplier test, the model with random effects is the preferred specification.

Table (4.3): Estimation result of empirical model (4.3) using pooled and panel data analysis

Independent Variables	Fixed Effects Model	Random Effects Model
$INTERCEPT$	11.435 **(0.000)**	11.222 **(0.000)**
DEF_{it}	0.236 **(0.080)**	0.650 **(0.000)**
D_{it}^{sz}	0.010 **(0.008)**	0.008 **(0.000)**
$INTAC_{it}^{sz}$	0.063 **(0.000)**	0.073 **(0.001)**
R^2	11.4%	12.45%
$F-statistic$	1035.3 **(0.000)**	784.9 **(0.000)**
$LM\sim test$ Chi^2 (1)	254.3 **(0.000)**	
Chi^2(3) $Hausman\sim test$		1.897 **(0.5412)**
$Breuch-PaganHetrosk$ Test	2.33 **(0.1265)**	
Mean VIF	1.053	

Notes: the dependant variable is the debt issued in year t (long term debt) scaled by total assets, DEF_{it}: the firms' internal funds deficits scaled by total assets figures in brackets below the coefficient are the probabilities of significance based on the standard errors which are corrected for heteroskedasticity.

The results shown in Table (4.3) provide no support for the pecking order theory in the industrial companies listed in the

[5] To decide between random and fixed effects, Hausman Test is used, with null hypothesis is that the preferred model is random effects.

GCC stock markets. The estimated coefficient on the deficit (DEF_{it}) variable is statically significant at the 1% level which implies there is no one-to-one relationship, the intercept (α_0) is also found to be statically significant and differed from zero, which implies that; other sources of external financing are used with debt to finance a firm's fund deficit. As a result the proposed hypotheses (α_0=0 and β DEF_{it}=1) are rejected, in other wards equity issues track the financing quite closely more than debt financing which in contrast with the pecking order theory.

The results of the study are in line with the studies which indicate that the debt financing is not dominated on the equity issues financing, such as Wang (2013), Bouchenaki (2012), Cross (2010), Zurigat (2009), Singh and Kurmar (2008), Ekeroth and Wahlberg (2006), Frank and Goyal (2003), Adjeeji (2002), and Nuri and Archer (2001). On the other hand the results of the study are in contradiction with other study for example, Ooldrink (2013), Al-Manaseer et al.,(2011), Sakatan (2010), Medeiros and Daher (2004), Chosh and Cai (2004),

Benito (2003), Chen (2003), Pandey (2001), and Shyam-Sunder and Myers (1999).

The reason behind these results is that; the industrial companies listed in the GCC stock markets are tending toward internal financing, since the bond markets in the region are not developed, small, and still emerging. In addition, the other available sources for external financing are the commercial banks which encourage short term loans, and dealing with forbidden interest, all of these reasons induce the companies to use another sources of funds (equity issues) with debt to finance a firm's fund deficit.

In order to test the multicollinearity problem we employed the variance inflation factor (VIF).

Table (4.4): results of multicollinearity problem test using Variance Inflation Factor (VIF)

Independent Variable	VIF	1/VIF
DEF_{it}	1.06	0.946
D_{it}^{sz}	1.05	0.948
$INTAC_{it}^{sz}$	1.05	0.952
Mean VIF	1.053	0.949

The (VIF) results indicate that the model (4.3) dose not suffer from any multicollinearity problem since the (VIF) for all variables are ranged between 1.06 - 1.05 with average amount of 1.053, as it is shown in the table (4.3).

The study also uses Breuch-Pagan test to detect heteroskedasticty problem, as the table shown there is no heteroskedasticty problem in our models.

The most of the previous studies indicate that the pecking order theory has more support in small companies than large, since the transaction costs, and adverse selection costs are higher than large companies which induce firms to follow the pecking order behavior, such as, Chittenden et al., (1996), Jordan et al., (1998). On the other hand other studies provide evidence that the small firms do not follow the pecking order, since the pecking order performance for these firms was bad. (Frank and Goyal, (2003)).

To control for the size effects which might be existed and influence the firms financing decisions new dummy interaction model is developed, motivated by the fact that small firms are

consider to be financially constrained while the large one are not, where large firms are more diversified, with more collaterals and that make them less subject to the financial distress.

As shown from the table, the estimated coefficient of both; interaction $INTAC_{it}^{sz}$ and D_{it}^{sz} are statically significant, which implies that there is a different between both models (4.4.a) (4.4.b) , also the effect of firm's size is statically significant on the financing deficit and the size effects are existed.

F-Test is employed among both restricted and unrestricted models, where the unrestricted model contains D_{it}^{sz} and $INTAC_{it}^{sz}$ dummy variables as additional explanatory variable with $DEFCT_{it}$ variable, while the restricted model consists only $DEFCT_{it}$ variable as explanatory variable. The calculate F value is statically significant at the 1% level, which indicates that large companies rely more on debt to finance its deficit rather than small companies. For large companies using model (4.4.a) when the (D_{it}^{sz} =1) the estimation coefficient will be .723 and it is

statistically significant at 1%, while the estimation coefficient for small companies will be .650. Finally as a result the large industrial companies listed in the GCC stock markets rely on debt to finance it financial deficit rather than small companies. However, the results provide that there is no support for the pecking order theory in industrial companies listed in the GCC stock markets.

More specifically the study employs the same models on each market separately, so the following table shown the estimation results of model (4.4) for each market.

Table (4-5)
Estimation results of empirical Model (4.3) using pooled and panel Data analysis for each market

Independent Variables	**Fixed Effects Market** (Saudi stock exchange)	**Random Effects Market** (Muscat Stock Market)	**Fixed Effects Market** (Abu Dhabi Stock Exchange)	**Fixed Effects Market** (Qatar Stock Exchange)	**Fixed Effects Market** (Kuwait Stock Exchange)
INTERCEPT	7.205 **(0.060)**	10.218 **(0.030)**	9.435 **(0.000)**	12.002 **(0.090)**	13.475 **(0.009)**
DEF_{it}	0.536 **(0.020)**	0.450 **(0.000)**	0.606 **(0.010)**	0.661 **(0.006)**	0.497 **(0.039)**
D_{it}^{sz}	0.116 **(0.068)**	0.098 **(0.124)**	0.210 **(0.218)**	0.188 **(0.087)**	0.321 **(0.018)**
$INTAC_{it}^{sz}$	0.093 **(0.000)**	0.103 **(0.021)**	0.123 **(0.035)**	0.099 **(0.005)**	0.118 **(0.000)**
R^2	16.33%	13.09%	13.46%	13.98%	12.16%
$F-statistic$	135.3 **(0.000)**	211.3 **(0.010)**	445.7 **(0.000)**	105.22 **(0.000)**	117.5 **(0.002)**
Chi^2 (1) $LM \sim test$	331.9 **(0.000)**	604.4 **(0.000)**	159.1 **(0.000)**	418.5 **(0.000)**	317.8 **(0.000)**
Chi^2(3) $Hausman \sim test$	11.25 (0.008)	1.02 (0.214)	9.25 (0.022)	7.54 (0.009)	2.18 (0.000)
Breuch- Paganhetrosk	0.874 **(0.156)**	1.87 (0.224)	3.05 **(0.072)**	2.13 (0.115)	2.07 **(0.331)**

The general result about no support for the pecking order theory is still existed for each market, since the estimated coefficient on the deficit ($DEFCT_{it}$) variable is statically significant at the 5% level in Saudi Arabia, 1% level on Oman, 1% level in Emiratis, 1% level in Qatar, and 5% level in

Kuwait., the intercept (α_0) is also found to be statically significant at 5% level except in Abu Dhabi Exchange at 1% level, and differed from zero for each market.

As we noted from table (4.5) the estimated coefficient on the deficit variable in Qatar and Emirates is close to the estimated coefficient on the deficit variable which obtained for total sample, since the industrial companies in Qatar and Emirates use long term debt to finance its deficit more than other source. On the other hand the industrial companies listed in Saudi, Kuwait, and Oman tend toward another sources such as short term debt and equity issuance more than long term debt, which implies that long term debt in Oman, Kuwait, and Saudi Arabia is not preferred to finance deficit. The reason behind that may be the bond markets in these countries are not developed yet, the external financing sources are limited to commercial banks which encourage short term debt, and finally some of religious legislation play an important role since these legislations may prohibits dealing with forbidden interest such as in Saudi Arabia.

Also the estimated coefficient of both interaction $INTAC_{it}^{sz}$ and D_{it}^{sz} are statically significant at 1% level in Saudi, and Kuwait Stock Exchange, and statically significant at 5% level in the other markets, as a result the large companies listed in the GCC stock markets rely more in debt to finance its financial deficit, since the estimated coefficient which obtained from model (4.4.a) in each market, gives more explanatory power to explain financing deficit by long term debt for large companies and equal (.760, .729, .629, .615, .553) in Qatar, Emirates, Saudi Arabia, Kuwait, and Oman Respectively.

Chapter five: Conclusion and Recommendations

5.1 Introduction

5.2 Findings

5.3 Limitations of the Study

5.4 Recommendations

Chapter Five

Conclusion and Recommendations

5.1 Introduction

The study aims at testing the pecking order theory of capital structure of industrial companies listed on Gulf Cooperation Council stock markets during a period 2005 to 2012, using different econometrics techniques to test its empirical models. This chapter contents summarized the most important finding based on the results which were produced in the pervious chapter, Therefore, the current chapter is divided as follows: section 5.2 aims to present the most important findings of the study, section 5.3 discuss some limitations of the study, and finally section 5.4 provides some recommendations for future work in this area.

5.2 Findings

1. The results of the study provide evidence of no support for the pecking order theory in industrial companies listed in Gulf Cooperation Council stock markets.

2. The results show that the industrial firms listed on Gulf Cooperation Council stock markets use debt and equity funds to finance their financing deficit, since the equity issues track the financing deficit relatively more closely than debt, it could be the reason behind the absence of the bond markets in Gulf Cooperation Council, which call for the need of improving the bond markets in the region.
3. The firm's size has a significant effect on the financing pattern behavior on Gulf Cooperation Council, since the large companies use long term debt to finance its financial deficit more than other finance sources, which implies that the small companies suffer from financial constraints.
4. Debt markets in the region is not developed yet, still small, with no transparency, no competitions, short term debt and new equity issues are prevailing on the long term debt, since the external financing sources are limited to commercial banks which encourage short term debt.

5.3 Limitations of the Study

The study investigates the pecking order theory concentrating only on the industrial sector without referring to any other sectors, since the policies followed by these companies differed from those followed by other ones, tacking into consideration the use of the figures contained in the budget and annual reports of the companies without any modification, which may affect the validity of the results due to the different accounting policies among the firms. In addition to that the study is limited to use a sample of 64 companies during 2005-2012 as a result of missing data.

5.4 Recommendation

The study recommends to follow the policies that lead to reduce the financial constraints from which the companies suffer, in order to increase the level of disclosure by solving the problem of asymmetric information, raising the level of transparency, increasing the level of investor protection, to reduce agency problems, then increase the ability of the

industrial companies listed on those markets to diversify their sources of financing.

The study recommends to develop the bond markets in the region, tacking into considerations the religious legislation since the Islamic economics did not leave any point with no solution, Debt could be limited because the external financing sources are limited to commercial banks, some of religious legislation play an important role since this legislations may prohibits dealing with forbid interest.

This study ignores the financial crisis. However, the study recommended -for future research- to employing a dummy variable to accommodate the effects of financial crisis which help to remove any possible bias during the study period.

REFERANCES:

Adedeji, T. (2002). A cross-sectional test of Pecking Order Hypothesis Against Static Trade-off Theory on UK data. *Available at SSRN 302827*.

Al-Gharaibeh, M., Zurigat, Z., & Al-Harahsheh, K. (2013). The Effect of Ownership Structure on Dividends Policy in Jordanian Companies. *INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS, 4 (9), 769*, *796*.

Al.Manaseer, M, F. Gonis, E. Al-Hindawi, R, M and Sartawi, I, I. 2011.Testing The Pecking Order and the Target Models of Capital Structure: Evidnce from UK. *European Journal of Economics, Finance and Administrative Sciences.* (41): 1450-2275.

Baskin, J. (1989). An empirical investigation of the pecking order hypothesis. *Financial management*, 26-35.

Benito, A. (2003). The Capital Structure Decisions of Firms: Is There a Pecking Order? *Working Paper.* Spain: Banco De Espana.

Bradley, M., Jarrell, G. A., & Kim, E. (1984). On the existence of an optimal capital structure: Theory and evidence. *The journal of Finance*, *39*(3), 857-878.

Buferna, F. M., Bangassa, K., & Hodgkinson, L. (2005). *Determinants of capital structure: evidence from Libya* (Vol. 8). University of Liverpool.

Cai, F., & Ghosh, A. (2003). Tests of capital structure theory: a binomial approach. *The Journal of Business and Economic Studies*, *9*(2), 20-32.

Cotei, C., & Farhat, J. (2009). The trade-off theory and the pecking order theory: Are they mutually exclusive?. *North American Journal of Finance & Banking Research*, *3*(3).

Cross, R. (2010). *Capital structure and financing choices: an Australian study: a thesis submitted in partial fulfillment of the requirements for the degree of Master of Business Studies in Finance at Massey University*.

DeAngelo, H., and Masulis, R. (1980). Optimal Capital Structure Under Corporate and Personal Taxation. *Journal of Financial Economics,* pp. 3-29.

De Medeiros, O. R., & Daher, C. E. (2004, December). Testing static tradeoff against pecking order models of capital structure in Brazilian firms. In *4th USP Congress of Management Control and Accounting, held in Sao Paulo (Brazil)*.

Donaldson, G. (1961). *Corporate debt capacity: A study of corporate debt policy and the determination of corporate debt capacity*. Boston: Devision of Research, Graduate School of Business Administration, Harvard Uniuversity.

Ekeroth, K., & Andrén, N. (2006). Tests of optimal capital structure theory and pecking order theory using a binomial approach.

Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, *67*(2), 217-248.

Frank, M. Z., & Goyal, V. K. (2005). Trade-off and pecking order theories of debt. *Handbook of empirical corporate finance*, *2*, 135-202.

Gruber, M. J., & Warner, J. B. (1977). Bankruptcy costs: some evidence. *The journal of Finance*, *32*(2), 337-347.

Harris, M., & Raviv, A. (1991). The theory of capital structure. *the Journal of Finance*, *46*(1), 297-355.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.

Kraus, A., & Litzenberger, R. H. (1973). A STATE‐PREFERENCE MODEL OF OPTIMAL FINANCIAL LEVERAGE. *The Journal of Finance*, *28*(4), 911-922.

Liu, Qinglan. (2013). Testing the pecking order theory of capital structure in Canadian firms. M.A Thesis. Halifax, Nova Scotia University.

Mayer, C., & Sussman, O. (2004). A new test of capital structure. In *AFA 2005 Philadelphia Meetings*.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American economic review*, 261-297.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction.

Myers, S. C. (1984). The capital structure puzzle. *The journal of finance*, *39*(3), 574-592.

Myers, S. C. (2001). Capital structure. *Journal of Economic perspectives*, 81-102.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, *13*(2), 187-221.

Oolderink, P. (2013). Determinants of capital structure: static trade-off theory vs. pecking-order theory: evidence from Dutch listed firms.

Pandey, I. M. (2001). Capital structure and the firm characteristics: evidence from an emerging market. *Indian Institute of Management Ahmedabad Working Paper*, No. 2001-10-04.

Sakatan, R. (2008). The Capital Structure in Developing Countries: Saudi Arabia. *Available at SSRN 2144187.*

Shyam-Sunder, L., & C Myers, S. (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of financial economics*, *51*(2), 219-244.

Singh, P., & Kumar, B. (2008). Trade Off Theory or Pecking Order Theory: What Explains the Behavior of the Indian Firms?. *Available at SSRN 1263226*.

Vicol. M. (2010). Capital Structure: Testing Pecking Order Theory and Static Trade-Off Theory in the Current Crisis. M.A Thesis. Charles University in Prague.

Wang, Z. (2013). The pecking order hypothesis or static tradeoff theory: research on capital structure based on a UK sample. M.A. Thesis. University of Twente.

Warner, J. (1977). Bankruptcy Costs: Some Evidence. *Journal of Finance,* 32, 337-347.

Zurigat, Z. (2009). Pecking Order Theory, Trade-off Theory and Determinants of Capital Structure*:* Empirical Evidence from Jordan (Doctoral dissertation, Heriot-Watt University).

Zurigat, Z., & Gharaibeh, M. (2011). Do Jordanian Firms Smooth their Dividends? Empirical Test of Symmetric and Asymmetric Partial Adjustment Models. *International Research Journal of Finance and Economics*, *81*, 20.

-المراجع باللغة العربية

المولا، منى ممدوح/بوشناقي، فتيحة نور الدين/زريقات، زياد محمد. (2012). *إختبار نظرية الأولويات في التمويل لهيكل رأس المال: دليل من سوق عمان المالي = Testing the Pecking Order Theory of Capital Structure: Evidence from Amman Stock Exchange*. M.A. Thesis Yrmouk University.

اعداد مختلفة من التقارير السنوية للاسواق الاسهم في دول مجلس التعاون الخليجي.

-Websites:

www.tadawul.com.sa Saudi Arabia Stock Market website

www.kuwaitse.com Kuwait Stock Exchange website

www.msm.gov.om Muscat Security Market website

www.bahrainbourse.net Bahrain Bourse website

www.qe.com.qa Qatar Exchange website

www.esm.sca.ae Emiratis Securities Market

www.Gulfbase.com The premier source of detailed financial information on the joint stock companies in the GCC region